

UNCLASSIFIED

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)							DATE February 2000		
BUDGET ACTIVITY 3 - Advanced Technology Development				PE NUMBER AND TITLE 0603654A Line-of-Sight Technology Demonstration				PROJECT D460	
COST (In Thousands)	FY1999 Actual	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY2004 Estimate	FY2005 Estimate	Cost to Complete	Total Cost
D460 LOSAT Technology Demonstration	15126	37845	50727	57127	28243	0	0	0	391629

A. Mission Description and Budget Item Justification: Project D460-LOSAT Technology Demonstration: This program focuses on the integration of the Line-of-Sight Anti-Tank (LOSAT) weapon system into an air-mobile configuration in order to help remedy the early entry force lethality shortfall against heavy armor. The LOSAT weapon system consists of a kinetic energy (KE) missile launcher mounted on a heavy High Mobility Multi-purpose Wheeled Vehicle (HMMWV) chassis. LOSAT offers a near-term advanced capability for overwhelming armor destruction with a high rate of fire, increased range, and increased force survivability. LOSAT, deployed in the early entry force, will provide the decisive edge to win swiftly with minimum casualties and provides an assault support weapon capability. LOSAT is strategically and tactically deployable, giving Commanders and decision makers greater flexibility. The performance of this hypervelocity kinetic energy missile (velocity of a mile per second) is not affected by the proliferation of emerging threat active protective systems and enhanced reactive armors which are both rapidly becoming available on the global marketplace. LOSAT was initiated as a DoD-approved Advanced Concept Technology Demonstration (ACTD) program in FY1998 to position the technology for future acquisition decisions; demonstrate subsystem capabilities in flight tests and dirty battlefield environments; evaluate the utility of the LOSAT technology for the early entry forces; demonstrate an integrated HMMWV-based LOSAT system in-flight test and advanced warfighting experiments; and evaluate affordability issues. The ACTD program is a cost-effective means to assess the operational value of LOSAT to the early entry force through deployment with the XVIII Airborne Corps while longer-term applied research efforts continue for a small Compact Kinetic Energy Missile and an objective Medium Combat Vehicle. The work in this program element is consistent with the Army Science and Technology Master Plan, and the Army Modernization Plan.

The funding in PE 0604819A, Budget Activity 5 (FY 01 \$26.8M, FY 02 \$21.5M, FY 03 \$14.1M, FY 04 \$14.9M, FY 05 \$15.9M) will be used to support the New Army Vision/Transformation by adding additional design activities, reducing risk, completing system qualification testing, and adding additional Operational tests to support transition to limited production of the LOSAT Weapon System, with production funds starting in FY 04.

FY 1999 Accomplishments:

- 8490 - Completed Fire Unit electronics and mechanical conceptual designs.
- 4040 - Completed Missile electronics and mechanical conceptual designs.
- 1340 - Completed Fire Unit software preliminary requirements development and analysis, and initiated preliminary software design.
- 615 - Conducted Inertial Measurement Unit Spin & Shock Test and analysis.
- 230 - Completed Fire Unit controls/displays baseline development, and initiated supplier analysis.
- 280 - Initiated Fire Unit prototype tooling and test equipment design.
- 131 - Continued Virtual Prototype Simulator design update.

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Total 15126 FY 2000 Planned Program: <ul style="list-style-type: none"> • 18871 - Complete Fire Unit electronic preliminary designs including six major line replaceable units and interior mechanical preliminary designs. • 7760 - Complete Missile electronic and mechanical preliminary designs. • 2425 - Conduct Launch effects planning, test, and analysis. • 1820 - Complete Fire Unit exterior structural design. • 2430 - Continue Fire Unit software design and analysis. • 1700 - Fabricate Fire Unit structural prototype for Launch Effects test. • 850 - Continue Fire Unit test equipment design. • 970 - Complete Virtual Prototype Simulator upgrade. • 1019 - Small Business Innovative Research/Small Business Technology Transfer Total 37845 FY 2001 Planned Program: <ul style="list-style-type: none"> • 28857 - Complete Fire Unit electronic and interior mechanical detail designs, conduct design reviews, and initiate fabrication. • 10720 - Complete Missile electronic and mechanical detail designs, conduct design reviews, and initiate fabrication. • 5670 - Conduct Risk Reduction flight test planning, tests, and analysis. • 2210 - Complete tooling design and initiate fabrication. • 2000 - Complete Fire Unit software design and code, and initiate system level testing. • 770 - Complete design, and initiate fabrication of training devices and prototype simulators. • 500 - Initiate Missile software update design, code, and test. Total 50727		
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